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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BIAGINI, CHRISTOPHER D	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/092,158	WIES ET AL.
	Examiner	**Art Unit**
	Christopher Biagini	2442

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *79-105* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *79-105* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/12/2008*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Remarks

This application has been assigned to a new examiner. Contact information may be found at the end of this action.

Applicant's amendment to the specification is sufficient to overcome the rejection of claims 95 through 105 under 35 U.S.C. § 101. The rejection is withdrawn.

A Technology Center Director for TC 2400 has approved of reopening prosecution by signing below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 79, 81-85, 90, 91, 93-96, 101, 102, 104, and 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. ("Design and Evaluation of a High-Performance Prototype Planar Haptic Interface," hereinafter "Ellis") in view of Mitsuishi et al. ("A Tele-micro-surgery System across the Internet with a Fixed Viewpoint/Operation-Point," hereinafter "Mitsuishi").

Regarding claim 79, Ellis shows a method comprising:

- receiving an input signal, the input signal comprising an embedded force feedback command (the signal comprising the transmission from a remote slave robot which include the “feedback variables”: see the first column on page 56);
- extracting the force feedback command from the input signal (comprising acquiring the force feedback from the transmission: see section 3.3 on page 60); and
- generating an output signal associated with the force feedback command (comprising outputting a current to the actuators which make up the haptic interface: see section 3.3 on page 60).

Although the input signal in Ellis is received from a remote location (“teleoperation”), Ellis does not explicitly disclose that the signal is received from a network. However, a person of ordinary skill in the art, upon reading Ellis, would also have recognized the desirability of improved methods of teleoperation. Mitsuishi discloses that transmitting signals over a network (the network comprising the Internet) is one of a finite number of methods of data transmission known to be useful for teleoperation. See section 9, beginning on page 184. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to try receiving signals using the system of Internet teleoperation taught by Mitsuishi, as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn,

because the system as claimed has the properties predicted by the prior art, it would have been obvious to make the system.

Regarding claim 81, note that in the combination of Ellis and Mitsuishi described above, the network comprises the Internet.

Regarding claim 82, Ellis further shows wherein the output signal is operable to cause a manipulandum (comprising the haptic interface) to output a force (see Abstract, footnote 2 on page 56, and section 3.3 on page 60.)

Regarding claim 83, Ellis further shows wherein the output signal is operable to cause a force to be output in a simulation device comprising a processor (comprising the haptic interface system, which includes a processor as described in section 3.3, beginning on page 60).

Regarding claim 84, Ellis further shows wherein the input signal is a first input signal and receiving a second input signal from a maniplandum (the second input signal comprising user input to the haptic interface: see left-side column of page 56, footnote 2 on page 56, and section 2.1, beginning on page 56).

Regarding claim 85, Ellis further shows wherein the output signal is further associated with the second input signal. The output signal is a function of force

feedback commands which are sent in response to the user input (corresponding to the claimed “second input signal”): see page 56, left-side column and footnote 2.

Regarding claim 90, Ellis further shows receiving the output signal (comprising the current directed toward the motors) and generating a force feedback effect (comprising actuating the motors to generate a force). See section 1, beginning on page 55, and section 3.3, beginning on page 60.

Regarding claim 91, Ellis shows a method comprising:

- receiving a force feedback command (comprising the transmission system of a remote slave robot obtaining feedback variables for transmission: see first column and footnote 1 on page 56);
- embedding the force feedback command in an output signal (comprising placing the feedback variables into a network transmission: see first column and footnote 1 on page 56); and
- transmitting the output signal (comprising transmitting the transmission to the master system: see first column on page 56).

Although the output signal in Ellis is transmitted to a remote location (“teleoperation”), Ellis does not explicitly disclose that the signal is transmitted over a network. However, a person of ordinary skill in the art, upon reading Ellis, would also have recognized the desirability of improved methods of teleoperation. Mitsuishi discloses that transmitting signals over a network (the network comprising the Internet)

is one of a finite number of methods of data transmission known to be useful for teleoperation. See section 9, beginning on page 184. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to try transmitting signals using the system of Internet teleoperation taught by Mitsuishi, as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the system as claimed has the properties predicted by the prior art, it would have been obvious to make the system.

Regarding claim 93, note that in the combination of Ellis and Mitsuishi described above, the network comprises the Internet.

Regarding claim 94, Ellis further shows wherein the force feedback command comprises an authored force feedback command. Note that the Merriam-Webster Dictionary defines *author* as “one that originates or creates.” Since the remote slave robot of Ellis originates the force feedback command, the command may be interpreted as an “authored force feedback command.”

Regarding claim 95, Ellis shows a computer-readable medium storing instructions to cause a processor (necessary components of a computer-implemented system) to:

- receive an input signal, the input signal comprising an embedded force feedback command (the signal comprising the transmission from a remote

slave robot which include the “feedback variables”: see the first column on page 56);

- extract the force feedback command from the input signal (comprising acquiring the force feedback from the transmission: see section 3.3 on page 60); and
- generate an output signal associated with the force feedback command (comprising outputting a current to the actuators which make up the haptic interface: see section 3.3 on page 60).

Although the input signal in Ellis is received from a remote location (“teleoperation”), Ellis does not explicitly disclose that the signal is received from a network. However, a person of ordinary skill in the art, upon reading Ellis, would also have recognized the desirability of improved methods of teleoperation. Mitsuishi discloses that transmitting signals over a network (the network comprising the Internet) is one of a finite number of methods of data transmission known to be useful for teleoperation. See section 9, beginning on page 184. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to try receiving signals using the system of Internet teleoperation taught by Mitsuishi, as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the system as claimed has the properties predicted by the prior art, it would have been obvious to make the system.

Regarding claim 96, Ellis further shows wherein the input signal is a first input signal and instructions to receive a second input signal from a maniplandum (the second input signal comprising user input to the haptic interface: see left-side column of page 56, footnote 2 on page 56, and section 2.1, beginning on page 56).

Regarding claim 101, Ellis further shows instructions to receive the output signal (comprising the current directed toward the motors) and generate a force feedback effect (comprising actuating the motors to generate a force). See section 1, beginning on page 55, and section 3.3, beginning on page 60.

Regarding claim 102, Ellis shows a computer-readable medium storing instructions to cause a processor (necessary components of a computer-implemented system) to:

- receive a force feedback command (comprising the transmission system of a remote slave robot obtaining feedback variables for transmission: see first column and footnote 1 on page 56);
- embed the force feedback command in an output signal (comprising placing the feedback variables into a network transmission: see first column and footnote 1 on page 56); and
- transmit the output signal (comprising transmitting the transmission to the master system: see first column on page 56).

Although the output signal in Ellis is transmitted to a remote location ("teleoperation"), Ellis does not explicitly disclose that the signal is transmitted over a network. However, a person of ordinary skill in the art, upon reading Ellis, would also have recognized the desirability of improved methods of teleoperation. Mitsuishi discloses that transmitting signals over a network (the network comprising the Internet) is one of a finite number of methods of data transmission known to be useful for teleoperation. See section 9, beginning on page 184. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to try transmitting signals using the system of Internet teleoperation taught by Mitsuishi, as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the system as claimed has the properties predicted by the prior art, it would have been obvious to make the system.

Regarding claim 104, note that in the combination of Ellis and Mitsuishi described above, the network comprises the Internet.

Regarding claim 105, Ellis further shows wherein the force feedback command comprises an authored force feedback command. Note that the Merriam-Webster Dictionary defines *author* as "one that originates or creates." Since the remote slave robot of Ellis originates the force feedback command, the command may be interpreted as an "authored force feedback command."

Claims 86-89 and 97-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis in view of Mitsuishi, and further in view of Salcudean et al. (US Patent No. 5,382,885, hereinafter “Salcudean”).

Regarding claim 86, Ellis further shows wherein the force feedback command comprises a first force feedback command and receiving the output signal (comprising the current directed toward the motors: see section 1, beginning on page 55), but does not show overriding the first force feedback command with a second force feedback command.

Salcudean shows overriding a first force feedback command with a second force feedback command (comprising applying force feedback that is significantly larger than the force from a slave: see col. 7, lines 19-31).

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system of Ellis to override the received force feedback command with a magnified force feedback command as taught by Salcudean in order to more accurately control minute movements of the slave robot (see Salcudean, col. 2, lines 22-27).

Regarding claim 87, Ellis further shows wherein the first force feedback command comprises an authored force feedback command. Note that the Merriam-Webster Dictionary defines *author* as “one that originates or creates.” Since the remote

slave robot of Ellis originates the force feedback command, the command may be interpreted as an “authored force feedback command.”

Regarding claim 88, note that in the combination of Ellis, Mitsuishi, and Salcudean described above, the second force feedback command comprises a generic force feedback command. Since the magnified force feedback command is applied to all inputs from the slave, it is generic.

Regarding claim 89, note that the combination of Ellis, Mitsuishi, and Salcudean described above further provides for generating a force feedback effect associated with the second force feedback command (comprising the force feedback applied to the master).

Regarding claim 97, Ellis further shows wherein the force feedback command comprises a first force feedback command and instructions to receive the output signal (comprising the current directed toward the motors: see section 1, beginning on page 55), but does not show instructions to override the first force feedback command with a second force feedback command.

Salcudean shows overriding a first force feedback command with a second force feedback command (comprising applying force feedback that is significantly larger than the force from a slave: see col. 7, lines 19-31).

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the system of Ellis to override the received force feedback command with a magnified force feedback command as taught by Salcudean in order to more accurately control minute movements of the slave robot (see Salcudean, col. 2, lines 22-27).

Regarding claim 98, Ellis further shows wherein the first force feedback command comprises an authored force feedback command. Note that the Merriam-Webster Dictionary defines *author* as “one that originates or creates.” Since the remote slave robot of Ellis originates the force feedback command, the command may be interpreted as an “authored force feedback command.”

Regarding claim 99, note that in the combination of Ellis, Mitsuishi, and Salcudean described above, the second force feedback command comprises a generic force feedback command. Since the magnified force feedback command is applied to all inputs from the slave, it is generic.

Regarding claim 100, note that the combination of Ellis, Mitsuishi, and Salcudean described above further provides for instructions to generating a force feedback effect associated with the second force feedback command (comprising the force feedback applied to the master).

Allowable Subject Matter

Claims 80, 92, and 103 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest wherein the input signal is associated with at least one of a web page, a java applet, and an ActiveX control. Although Goldberg et al. ("Desktop Teleoperation via the World Wide Web") teach a system which allows for control of a remotely located robot via a web page, the document teaches away from use of such a system in a force-feedback environment (see section 8, beginning on page 659).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Goldberg et al. (“Desktop Teleoperation via the World Wide Web") teach a system which allows for control of a remotely located robot via a web page.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Biagini whose telephone number is (571) 272-9743. The examiner can normally be reached on weekdays from 8:30 AM to 5:00 PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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